

DEPARTMENT OF EDUCATION-FSA FMS INTEGRATION PARTNER INTERFACE FUNCTIONAL DESIGN



FMS TO GAPS INTERFACE UPDATE

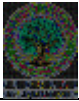
Author: Michael Connors
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		Subject: FMS to GAPS Interface Functional Design
		Phase: TO 119 - Transaction ID
Prepared by: John Kim	Date: January 14, 2003	Version: 4.0

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Document Change Control

Date	Author	Version	Change Reference
11/06/02	Mike Connors	1.0	Document Creation
11/14/02	Mike Connors	2.0	Updated based on review comments
01/06/03	Mike Connors	3.0	Updated based on review comments
01/14/03	John Kim	4.0	Updated based on final review

Approval

Created By:	Mike Connors	962-0683	Creation Date: 11/06/02
Team Lead Sign Off:	John Kim	962-0702	Sign Off Date: 01/14/03
Project Lead Sign Off:	Jen Alden	962-0682	Sign Off Date:
FSA Representative Sign Off:	Shirley Singleton	377-3491	Sign Off Date:



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Specification

Interface Name:	FMS to GAPS Interface
Functional Design Document ID & Title:	FMS_GAPS_Interface_Update_FD
Application:	Oracle G/L, Oracle A/P
Priority:	High
Estimated Production Date:	April 2003
Other Affected Applications:	N/A
Comments:	N/A



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General Requirements

Interface Short Description:

The FMS to GAPS Interface program was originally implemented as part of FMS Phase III efforts. This interface was designed to facilitate FMS interaction with Grants and Administrative Payments System (GAPS). This allowed FMS to send files to GAPS containing accounting transactions related to Direct Loan Origination, Direct Loan Consolidation, Campus Based, and Pell programs.

The purpose of this document is to provide a detailed functional description of the updates to the interface from FMS to GAPS. As part of TO 119 - Transaction ID efforts, FMS has been tasked with the following enhancement requirements (as stated in section 3.0 of the TO 119 - Transaction ID Requirements Matrix document):

- Ability to send all 18 character Transaction IDs to GAPS.

Data Interface Expectations:

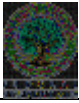
The updated GAPS Feeders to FMS interface programs and COD to FMS interface program will capture and store the Transaction ID in FMS. Subsequently, the Transaction ID will be sent to GAPS along with the transactions through the FMS to GAPS Interface program (Requirement 3.1.1). The purpose of the Transaction ID is to enhance the reconciliation effort between FMS and GAPS.

Business Event That Initiates Interface:

The FMS to GAPS Interface program is scheduled to run daily.

Interface Characteristics:

Interface Direction:	FMS to GAPS
Interface Type:	Batch
Interface Category:	Update to current FMS to GAPS Interface
Instances:	N/A
Frequency:	Daily
Volume:	The volume of transactions may vary.
From System: FMS	To System: GAPS



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Selection Criteria:

Same as the existing FMS to GAPS Interface program.

Scheduling Requirements:

Same as the existing FMS to GAPS Interface program.

Transaction Purge Criteria:

Same as the existing FMS to GAPS Interface program.

Contingency Procedures:

Same as the existing FMS to GAPS Interface program.

Development Complexity:

- Transaction ID – Medium

Assumptions:

- COD will provide Transaction IDs using the predefined specified format.
- ATTRIBUTE13 field of the GL_JE_LINES table will be used for storing Transaction IDs in FMS.
- ATTRIBUTE13 field of the AP_INVOICES_ALL table will be used for storing Transaction IDs in FMS.

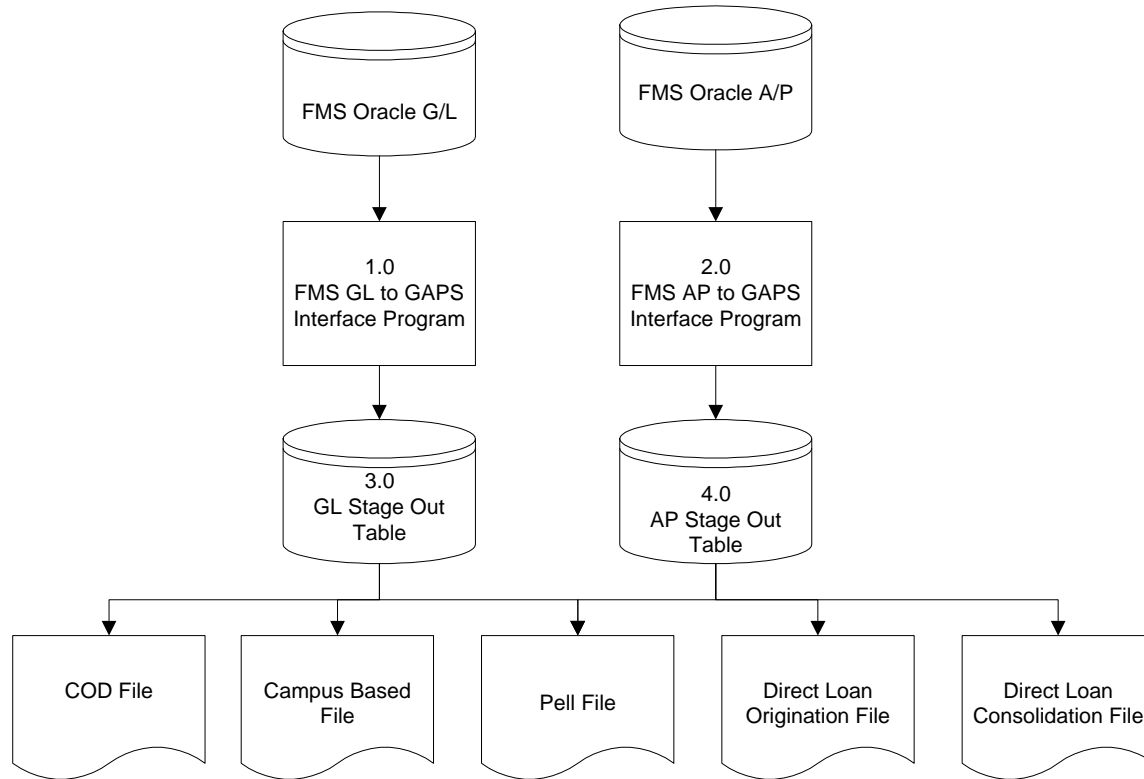


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Design

Data Flow Diagram:



Data Flow Diagram Narrative:

1.0 FMS GL to GAPS Interface Program

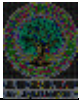
The FMS GL to GAPS interface program extracts transaction data from GL and loads it into the GL Stage Out table. An update needs to be made here in order for the Transaction ID to be incorporated into the GL Stage Out table. This change would include adding ATTRIBUTE13 to the query that extracts data from GL and adding this value to the query that loads the GL Stage Out table.

2.0 FMS AP to GAPS Interface Program

The FMS AP to GAPS interface program extracts transaction data from AP and loads it into the AP Stage Out table. An update needs to be made here in order for the Transaction ID to be incorporated into the AP Stage Out table. This change would include adding ATTRIBUTE13 to the query that extracts data from AP and adding this value to the query that loads the AP Stage Out table.

3.0 GL Stage Out Table

The FMS GL to GAPS Interface program loads this table with transaction data from GL in order to create the transaction files for each program that are sent to GAPS.



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4.0 AP Stage Out Table

The FMS AP to GAPS Interface program loads this table with transaction data from AP in order to create the program files for each program that are sent to GAPS.

Data Mapping:

The table below describes the format of the transactions within the files going to GAPS. The Transaction ID has been added to these files since original development in Phase III.

Transaction Format for All Files except for Excess Cash and Refunds:

Field Name	Field Number	Field Position	Field Type	Field Size (Characters)	Required Field	Description
Transaction Type	1	1-2	A	2	R	Values: 'OB' - Obligation 'PY' - Payment
Transaction Date	2	3-10	A	8	R	FMS Transaction Date Format - YYYYMMDD
PO Indicator	3	11-11	A	1	R	PO Code. First part of <u>GAPS Award Number</u> .
CFDA Number	4	12-14	N	3	R	CFDA Number. Second part of <u>GAPS Award Number</u> .
CFDA Subprogram ID	5	15-18	A	4	R	Subprogram ID letter (currently only one letter used in award numbers). Third part of <u>GAPS Award Number</u> . Format – Left justified, pad with spaces
Subprogram Fiscal Year	6	19-22	N	4	R	Fiscal year of Subprogram. Fourth part of <u>GAPS Award Number</u> . Format - YYYY
Award ID	7	23-26	N	4	R	Award ID number. Fifth part of <u>GAPS Award Number</u> . Format - Right justified, pad with zeros
Fund Fiscal Year	8	27-30	A	4	R	Funding Fiscal Year.
Object Class	9	31-35	A	5	R	Object Class Code. Seventh part of FMSS account code.



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Field Name	Field Number	Field Position	Field Type	Field Size (Characters)	Required Field	Description
Organization Code	10	36-43	A	8	R	Organization Code. Fifth part of FMSS account code.
Limitation Code	11	44-46	A	3	R	Limitation Code. Sixth part of FMSS account code.
Activity Code	12	47-49	A	3	R	Activity Code. Eighth part of FMSS account code.
CFDA Code	13	50-52	A	3	R	CFDA Code. Ninth part of FMSS account code.
Reverse Code	14	53	A	1	R	Values: '1' – Normal transaction '2' – Reversed transaction
Amount	15	54-67	N	14	R	Dollar amount of the transaction. Format - Right two positions are cents. Field is right justified, padded with zeros. (The decimal portion is implied.)
Grantee DUNS Number	16	68-78	A	11	R	Unique DUNS/SSN for the Grantee.
Grantee DUNS Type Code	17	79	A	1	R	Values: '1' – Organization '2' – Individual
Effective Date	18	80-87	N	8	R	The effective date of the transaction. (Usually an obligation, but payments can be future dated as well.) Format – YYYYMMDD
Payee DUNS Number	19	88-98	A	11	NR	Unique DUNS/SSN for the payee
Payee DUNS Type Code	20	99	A	1	NR	Values: '1' – Organization '2' – Individual



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Field Name	Field Number	Field Position	Field Type	Field Size (Characters)	Required Field	Description
Award Type	21	100-101	A	2	R	Values: 'CB' – Campus Based & Teacher Cancellations 'PL' – PELL 'DL' – Direct Loan Origination 'LC' – Direct Loan Consolidation
Project Start Date	22	102-109	N	8	R	The Project Start Date. Format – YYYYMMDD
Project End Date	23	110-117	N	8	R	The Project End Date. Format – YYYYMMDD
Budget Fiscal Year	24	118-121	A	4	R	Budget Fiscal Year. Third part of FMSS account code.
Cohort Year	25	122-125	A	4	R	Cohort Year. Tenth part of FMSS account code.
Sector	26	126	A	1	R	Sector. Eleventh part of FMSS account code.
Payment Source	27	127-128	N	2	R	Payment source. (For LO and LC only.) Values: 'LO' – Direct Loan Origination 'LC' – Direct Loan Consolidation
GAPS Transaction ID	28	129-146	A	18	R	Values: <Program Id><Date><Sequence #> Program ID = PL, LC, CB, LO Date = YYYYMMDD Sequence # = 8 digits
Filler	29	147	A	22	NR	Values: Spaces



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Transaction Format for Excess Cash and Refunds:

Field Name	Field Number	Field Position	Field Type	Field Size (Characters)	Required Field	Description
Transaction Type	1	1-2	A	2	R	Values: 'RF' – Refund
Transaction Date	2	3-10	A	8	R	FMS Transaction Date Format - YYYYMMDD
PO Indicator	3	11-11	A	1	R	PO Code. First part of <u>GAPS Award Number</u> .
CFDA Number	4	12-14	N	3	R	CFDA Number. Second part of <u>GAPS Award Number</u> .
CFDA Subprogram ID	5	15-18	A	4	R	Subprogram ID letter (currently only one letter used in award numbers). Third part of <u>GAPS Award Number</u> . Format – Left justified, pad with spaces
Subprogram Fiscal Year	6	19-22	N	4	R	Fiscal year of Subprogram. Fourth part of <u>GAPS Award Number</u> . Format - YYYY
Award ID	7	23-26	N	4	R	Award ID number. Fifth part of <u>GAPS Award Number</u> . Format - Right justified, pad with zeros
Fund Fiscal Year	8	27-30	A	4	R	Funding Fiscal Year.
Object Class	9	31-35	A	5	R	Object Class Code. Seventh part of FMSS account code.
Organization Code	10	36-43	A	8	R	Organization Code. Fifth part of FMSS account code.
Limitation Code	11	44-46	A	3	R	Limitation Code. Sixth part of FMSS account code.
Activity Code	12	47-49	A	3	R	Activity Code. Eighth part of FMSS account code.
CFDA Code	13	50-52	A	3	R	CFDA Code. Ninth part of FMSS account code.



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Field Name	Field Number	Field Position	Field Type	Field Size (Characters)	Required Field	Description
Reverse Code	14	53	A	1	R	Values: '1' – Normal transaction '2' – Reversed transaction
Amount	15	54-67	N	14	R	Dollar amount of the transaction. Format - Right two positions are cents. Field is right justified, padded with zeros. (The decimal portion is implied.)
Grantee DUNS Number	16	68-78	A	11	R	Unique DUNS/SSN for the Grantee.
Grantee DUNS Type Code	17	79	A	1	R	Values: '1' – Organization '2' – Individual
Effective Date	18	80-87	N	8	R	The effective date of the transaction. (Usually an obligation, but payments can be future dated as well.) Format – YYYYMMDD
Payee DUNS Number	19	88-98	A	11	NR	Unique DUNS/SSN for the payee
Payee DUNS Type Code	20	99	A	1	NR	Values: '1' – Organization '2' – Individual
Award Type	21	100-101	A	2	R	Values: 'CB' – Campus Based & Teacher Cancellations 'PL' – PELL 'DL' – Direct Loan Origination 'LC' – Direct Loan Consolidation
Project Start Date	22	102-109	N	8	R	The Project Start Date. Format – YYYYMMDD
Project End Date	23	110-117	N	8	R	The Project End Date. Format – YYYYMMDD



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Field Name	Field Number	Field Position	Field Type	Field Size (Characters)	Required Field	Description
Office Finance Code	24	118-129	A	12	R	Office Finance Code. (For LO and LC only.) Values: 'DSLPCOLL7'
Cohort Year	25	130-133	A	4	R	Cohort Year. Tenth part of FMSS account code.
Schedule Number	26	134-139	A	6	R	SF215 Schedule Number.
Budget Fiscal Year	27	140-143	A	4	R	Budget Fiscal Year. Third part of FMSS account code.
Sector	28	144	A	1	R	Sector. Eleventh part of FMSS account code.
GAPS Transaction ID	29	145-162	A	18	R	Values: <Program Id><Date><Sequence #> Program ID = PL, LC, CB, LO Date = YYYYMMDD Sequence # = 8 digits
Filler	30	163-168	A	6	NR	Values: Spaces

Database Objects:

Database Object Name	Object Type	Oracle Application	Comments
N/A			

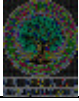
Dependencies

Data Cleansing:

Task	Responsibility	Dependency
N/A		

Dependencies on Other RICE Components:

N/A



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Dependencies on Other Business Components:

- COD to FMS Interface
- GAPS Feeders to FMS Interfaces

Design Constraints:

N/A

Performance Considerations:

N/A

Implementation Considerations:

N/A

Other Dependencies/Special Concerns:

N/A

Error Handling

Potential Errors	Possible Reasons	Solution Strategy
Same as the existing FMS to GAPS Interface program		

Testing Requirements

Test Condition	Expected Results
Refer to Unit Test Scripts in F: TO 119 - Transaction ID\ Core FMS\ Interface Design Updates\ Unit Testing\TEST SCRIPTS	

Issues and Additional Considerations

The following Issues were defined during Functional Design:

Issue	Raised By / Date Needed	Resolution/Answer	Resolved By / Date Completed
Do we send Transaction IDs for all transactions going to GAPS?	Mike	Yes. All GAPS related transactions should have a Transaction ID in FMS.	Mike
Are FMS AP to GAPS and FMS GL to GAPS the only programs that create files to send to GAPS?	Mike	Need clarification from FMS Operations development team.	Mike